



## Black Sea Bass Fishery Information Document

June 2022

This document provides a brief overview of the biology, stock condition, management system, and fishery performance for black sea bass (*Centropristis striata*) with an emphasis on 2021. Data sources include unpublished National Marine Fisheries Service (NMFS) commercial fish dealer reports, vessel trip reports (VTRs), permit data, as well as Marine Recreational Information Program (MRIP) data and stock assessment information. All 2021 data should be considered preliminary. For more information on black sea bass management, including previous Fishery Information Documents, visit <http://www.mafmc.org/sf-s-bsb>.

### Key Facts

- Black sea bass are not overfished and overfishing is not occurring, according to the most recent stock assessment. Spawning stock biomass in 2019 was estimated to be about 2.1 times the target level and fishing mortality was 15% below the threshold level.
- In 2021, about 4.52 million pounds of black sea bass were landed by commercial fishermen, the highest commercial landings in the time series going back to 1981.
- Commercial fish dealers paid an average of \$2.76 per pound of black sea bass, an increase from the 2020 average price of \$2.50, but below the 2012-2021 average of \$3.52 per pound (all values adjusted to 2021 dollars). Recent prices reflect impacts of the COVID-19 pandemic on market demand.
- Recreational fishermen harvested an estimated 11.97 million pounds of black sea bass in 2021, a 32% increase from 2020 and the second highest landings in the time series going back to 1981.
- Anglers fishing from private/rental vessels accounted for 84% of recreational black sea bass harvest (in numbers of fish) in 2021.

### Basic Biology

Black sea bass are distributed from the Gulf of Maine through the Gulf of Mexico. Genetic studies have identified three stocks within that region. This document focuses on the stock from the Gulf of Maine through Cape Hatteras, North Carolina.

Adult and juvenile black sea bass are mostly found on the continental shelf. Young of the year (i.e., fish less than one year old) can be found in estuaries. Adults show strong site fidelity during the summer and prefer to be near structures such as rocky reefs, coral patches, cobble and rock fields, mussel beds, and shipwrecks. Black sea bass migrate to offshore wintering areas starting in the fall. During the winter, young of the year are distributed across the shelf and adults and juveniles are found near the shelf edge. During the fall, adults and juveniles off New York and north move offshore and travel along the shelf edge to as far south as Virginia. Most return to northern inshore areas by May. Black sea bass off New Jersey to Maryland travel southeast to the

shelf edge during the late fall. Black sea bass off Virginia and Maryland travel a shorter distance due east to the shelf edge, which is closer to shore than in areas to the north.<sup>1,2</sup>

Black sea bass are protogynous hermaphrodites, meaning they are born female and some later transition to males, usually around 2-5 years of age. Male black sea bass are either of the dominant or subordinate type. Dominant males are larger than subordinate males and develop a bright blue nuchal hump during the spawning season. About 25% of black sea bass are male at 15 cm (about 6 inches), with increasing proportions of males at larger sizes until about 50 cm, when about 70-80% of black sea bass are male. Results from a simulation model highlight the importance of subordinate males in spawning success. This increases the resiliency of the population to exploitation compared to other species with a more typical protogynous life history. About half of black sea bass are sexually mature by 2 years of age and 21 cm (about 8 inches) in length. Black sea bass reach a maximum size of about 60 cm (about 24 inches) and a maximum age of about 12 years.<sup>2,3</sup>

Black sea bass in the Mid-Atlantic spawn in nearshore continental shelf areas at depths of 20-50 meters. Spawning usually takes place between April and October. During the summer, adult black sea bass share habitats with tautog, hakes, conger eel, sea robins and other migratory fish species. Essential fish habitat for black sea bass consists of pelagic waters, structured habitat, rough bottom, shellfish, sand, and shell, from the Gulf of Maine through Cape Hatteras, North Carolina. Juveniles and adults mostly feed on crustaceans, small fish, and squid. The Northeast Fisheries Science Center (NEFSC) food habits database lists spiny dogfish, Atlantic angel shark, skates, spotted hake, summer flounder, windowpane flounder, and monkfish as predators of black sea bass.<sup>1</sup>

### **Status of the Stock**

A black sea bass management track stock assessment was peer reviewed and accepted in June 2021.<sup>4</sup> This assessment retained the model structure of the 2016 benchmark stock assessment<sup>2</sup> and incorporated fishery data and fishery-independent survey data through 2019. Data from 2020 were not incorporated due to significant gaps in some data sets due to the COVID-19 pandemic and the time required to consider how to best address those gaps.

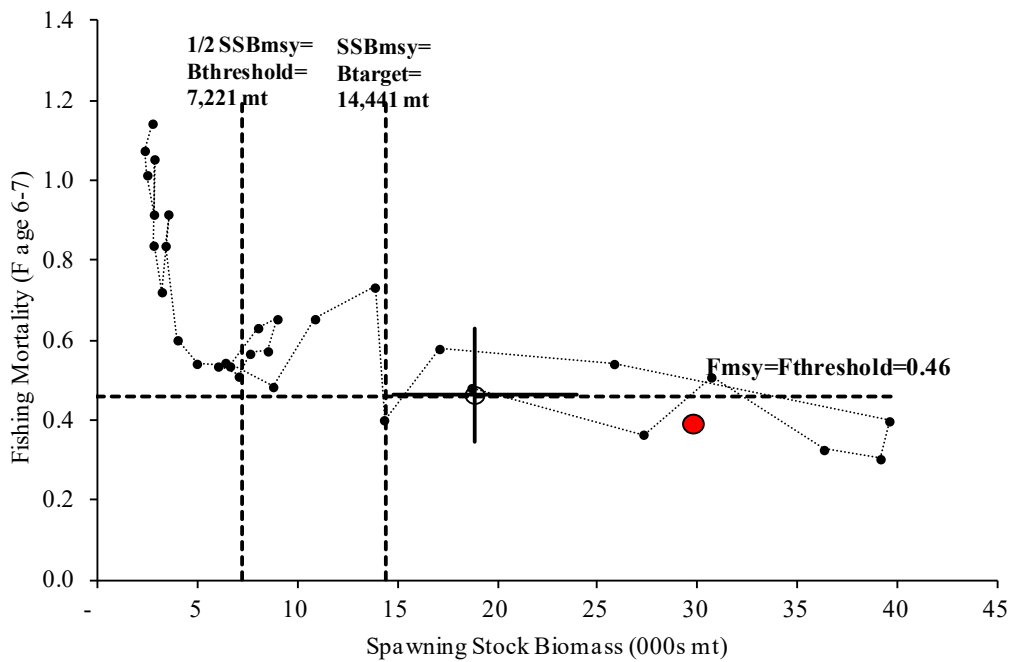
The 2021 management track assessment indicates that the black sea bass stock was not overfished and overfishing was not occurring in 2019. Spawning stock biomass in 2019 was estimated at about 2.1 times the target level. Fishing mortality in 2019 was estimated to be 15% below the threshold level that defines overfishing (Table 1, Figure 1 - Figure 3).<sup>4</sup>

The 2011 year class (i.e., fish spawned in 2011) was estimated to be the largest in the time series and the 2015 year class was the second largest. The 2017 year class was well below the 1989-2018 average, but the 2018 year class was above average at (Figure 2). The 2018 year class is the most recent year class for which estimates are currently available.<sup>4</sup>

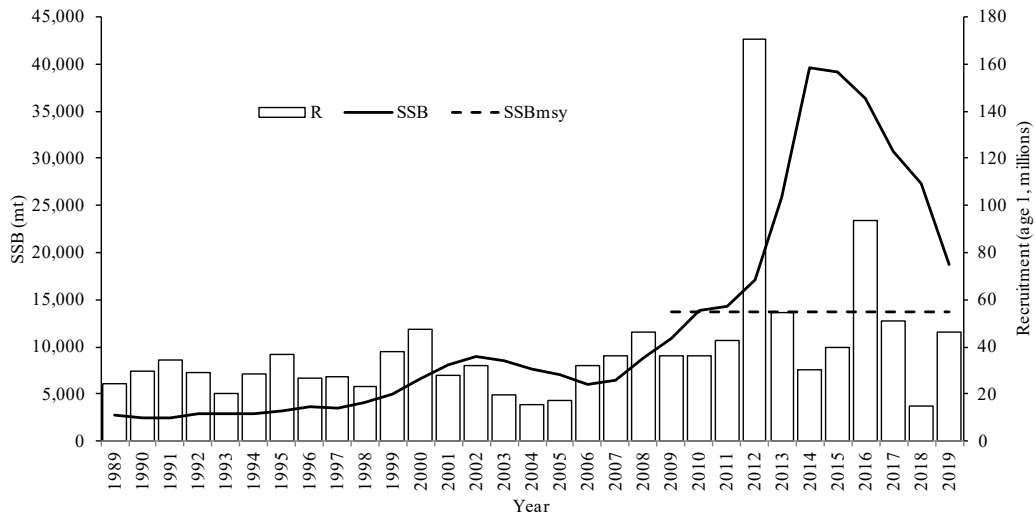
**Table 1:** Black sea bass biological reference points from the 2021 management track stock assessment.<sup>4</sup>

	Spawning stock biomass	Fishing mortality rate (F)
<b>Target</b>	31.84 mil lb (14,441 mt)	N/A
<b>Threshold</b>	15.92 mil lb (7,221 mt)	0.46
<b>Terminal year estimate (2019)</b>	65.53 mil lb (29,769 mt) <sup>a</sup> 2.1 times target level	0.39 <sup>a</sup> 15% below threshold level
<b>Status</b>	<b>Not overfished</b>	<b>Overfishing not occurring</b>

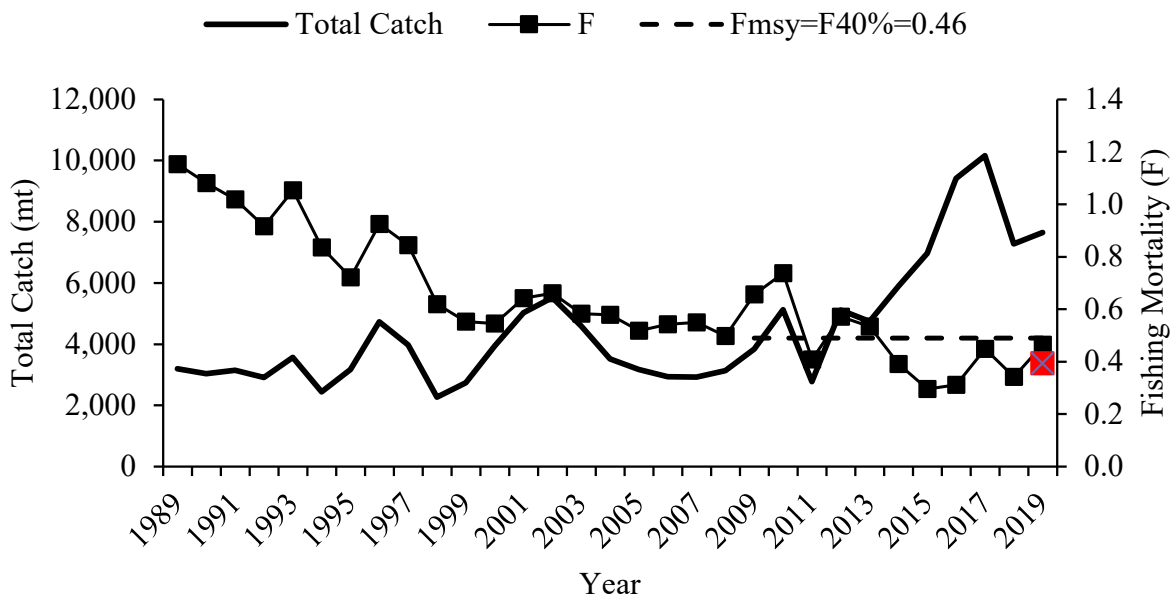
<sup>a</sup> Adjusted for retrospective bias



**Figure 1:** Estimates of black sea bass spawning stock biomass (SSB) and fully-recruited fishing mortality (F, peak at ages 6-7) relative to biological reference points. Open circle with 90% confidence intervals shows the assessment point estimates. The filled circle shows the retrospectively adjusted estimates which are used in management. Source: 2021 management track assessment.<sup>4</sup>



**Figure 2:** Black sea bass spawning stock biomass (SSB; solid line) and recruitment at age 1 (R; vertical bars), 1989-2019. The horizontal dashed line is the updated SSB<sub>MSY</sub> proxy = SSB<sub>40%</sub> = 14,441 mt. SSB and recruitment estimates for 2019 were adjusted for a retrospective pattern in the stock assessment. The un-adjusted values are shown in this figure. Adjusted SSB in 2019 for comparison against the SSB<sub>MSY</sub> proxy reference point is 29,769 mt. The adjusted recruitment value for 2019 is 79.4 million. Adjusted values are used in management. Source: 2021 management track assessment.<sup>4</sup>



**Figure 3:** Total fishery catch (metric tons; mt; solid line) and fishing mortality (F, peak at age 6-7; squares) for black sea bass. The horizontal dashed line is the updated F<sub>MSY</sub> proxy = F<sub>40%</sub> = 0.46. The red square is the retrospectively adjusted fishing mortality value for 2019. The adjusted value is used in management. Source: 2021 management track assessment.<sup>4</sup>

## Management System and Fishery Performance

### *Management*

The Mid-Atlantic Fishery Management Council (Council) and the Atlantic States Marine Fisheries Commission (Commission) work cooperatively to develop commercial and recreational fishery regulations for black sea bass from Maine through Cape Hatteras, North Carolina. The Council and Commission work in conjunction with NMFS, which serves as the federal implementation and enforcement entity. This cooperative management system was developed because a significant portion of the catch is taken from both state waters (0-3 miles offshore) and federal waters (3-200 miles offshore). The joint management program began in 1996 with the approval of amendment 9 to the Summer Flounder, Scup, and Black Sea Bass Fishery Management Plan (FMP). The original FMP and subsequent amendments and framework adjustments are available at: [www.mafmc.org/fisheries/fmp/sf-s-bsb](http://www.mafmc.org/fisheries/fmp/sf-s-bsb).

Commercial and recreational black sea bass fisheries are managed using catch and landings limits, minimum fish sizes, open and closed seasons, gear regulations, permit requirements, and other regulations.

The Council's Scientific and Statistical Committee (SSC) recommends annual Acceptable Biological Catch (ABC) levels for black sea bass. The Council must either approve the ABC recommended by the SSC or a lower ABC. Currently, 49% of the total allowable landings (calculated by subtracting total expected dead discards from the ABC) are allocated to the commercial fishery as a commercial quota and 51% allocated to the recreational fishery as an RHL. In December 2021, the Council and Commission revised the commercial/recreational allocation such that 45% of the ABC will be allocated to the commercial fishery and 55% to the recreational fishery. This represents a change from a landings-based allocation to a catch-based allocation, such that the allocation will be applied directly to the ABC instead of to the total allowable landings. These changes are pending review by NMFS and if approved, are expected to be effective January 1, 2023.<sup>5</sup>

The Council and Commission also approve commercial and recreational annual catch targets (ACTs), which are set equal to or less than the respective ACLs to account for management uncertainty. To date, the black sea bass ACTs have always been set equal to the ACLs. The ABC, ACLs, and ACTs are catch limits which account for both landings and discards, while the commercial quota and recreational harvest limit (RHL) are landing limits. The commercial quota and RHL are calculated by subtracting expected discards from the respective ACTs (Table 2).

### *Fishery Landings Summary*

Table 2 shows black sea bass catch and landings limits from 2012 through 2023, as well as commercial and recreational landings through 2021. Total landings (commercial and recreational) in 2021 totaled 16.48 million pounds and were the highest in the time series going back to 1981 (Figure 4).<sup>6,7</sup>

In July 2018, MRIP released revisions to their time series of recreational catch and harvest estimates based on adjustments for a revised angler intercept methodology and a new effort estimation methodology (i.e., a transition from a telephone-based effort survey to a mail-based effort survey). The revised estimates of catch and harvest are several times higher than the previous estimates for shore and private boat modes. All recreational estimates in this document reflect revised MRIP estimates except where otherwise noted.

Recreational harvest estimates for 2020 were impacted by temporary suspension of shoreside intercept surveys due to the COVID-19 pandemic. NMFS used imputation methods to fill gaps in 2020 catch data with data collected in 2018 and 2019. These proxy data match the time, place, and fishing mode combinations that would have been sampled had the APAIS continued uninterrupted. Proxy data were combined with observed data to produce 2020 catch estimates using the standard estimation methodology. Commercial landings reporting in 2020 continued uninterrupted; however, as of completion of this document commercial discard data for 2020 and 2021 are currently unavailable due to COVID-19 related interruptions in observer coverage.

**Table 2:** Summary of catch and landings limits, and landings for commercial and recreational black sea bass fisheries from Maine through Cape Hatteras, NC 2012 through 2023. All values are in millions of pounds unless otherwise noted. 2023 catch and landings limits are pending review by the SSC, Monitoring Committee, Council, and Commission and may be revised.<sup>6,7</sup>

Management measure	2012 <sup>a</sup>	2013 <sup>a</sup>	2014 <sup>a</sup>	2015 <sup>a</sup>	2016 <sup>b</sup>	2017 <sup>c</sup>	2018 <sup>c</sup>	2019 <sup>c</sup>	2020 <sup>c</sup>	2021 <sup>c,d</sup>	2022 <sup>c,d</sup>	2023 <sup>c,d,e</sup>
ABC	4.50	5.50	5.50	5.50	6.67	10.47	8.94	8.94	15.07	17.45	19.26	17.01
Com. ACL & ACT	1.98	2.60	2.60	2.60	3.15	5.09	4.35	4.35	6.98	9.52	10.10	8.93
Commercial quota <sup>e</sup>	1.71	2.17	2.17	2.21	2.71	4.12	3.52	3.52	5.58	6.09	6.47	5.71
Commercial landings	1.72	2.26	2.40	2.38	2.59	4.01	3.46	3.52	4.24	4.52	--	--
% of com. quota landed	101%	104%	111%	108%	96%	97%	98%	100%	76%	74%	--	--
Rec. ACL & ACT	1.86	2.90	2.90	2.90	3.52	5.38	4.59	4.59	8.09	7.93	8.76	7.74
RHL <sup>f</sup>	1.32	2.26	2.26	2.33	2.82	4.29	3.66	3.66	5.81	6.34	6.74	5.95
Recreational landings, old MRIP estimates	3.18	2.46	3.67	3.79	5.19	4.16	3.82	3.46 <sup>g</sup>	--	--	--	--
Recreational landings, revised MRIP estimates	7.04	5.69	7.24	9.06	12.05	11.50	7.92	8.61	9.05	11.97	--	--
% of RHL harvested (based on old MRIP estimates through 2018; new MRIP estimates for 2020-2021) <sup>h</sup>	241%	109%	162%	163%	184%	97%	104%	95%	156%	189%	--	--

<sup>a</sup> Catch and landings limits for 2010-2015 were based on a constant catch approach used by the Council's SSC to set the ABC.

<sup>b</sup> Catch and landings limits for 2016 were based on ABC that was set using a data poor management strategy evaluation approach.

<sup>c</sup> Catch and landings limits for 2017-2023 were set based on a peer reviewed and approved stock assessment. Starting with 2020, these catch and landings limits are based on a stock assessment that incorporates the revised time series of MRIP data.

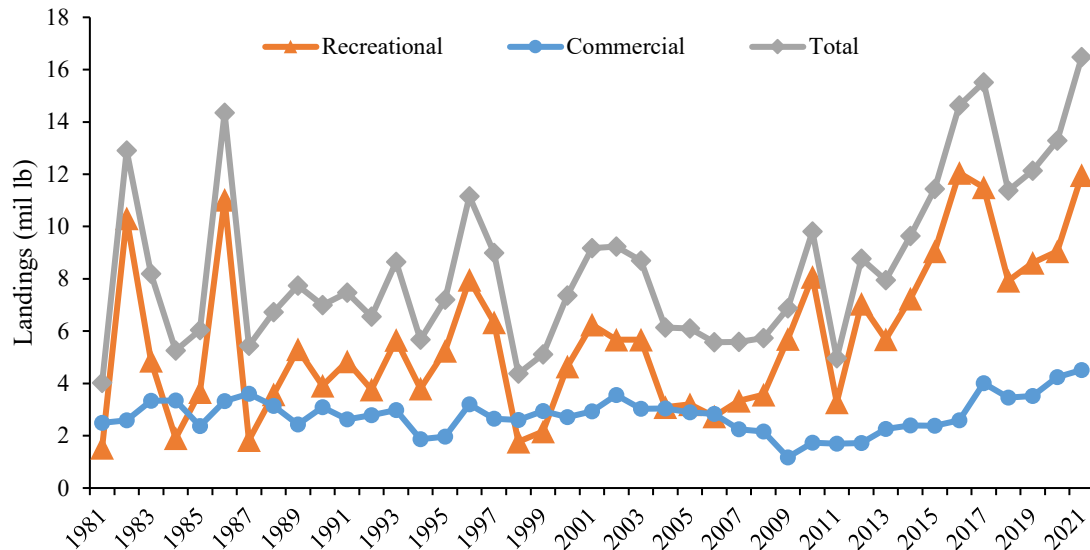
<sup>d</sup> The catch and landings limits for 2021 and beyond account for revisions to the Council's risk policy.

<sup>e</sup> Previously adopted limits for 2023 will be reviewed in 2022 by the SSC, Monitoring Committee, and Council/Commission. The commercial and recreational ACLs, ACTs, RHL, and commercial quota are expected to be revised based on recently adopted changes to the commercial/recreational allocation.

<sup>f</sup> The commercial quotas and RHLs for 2006-2014 account for deductions for the Research Set Aside program.

<sup>g</sup> Provided to the NMFS Greater Atlantic Regional Fisheries Office by the Northeast Fisheries Science Center.

<sup>h</sup> The percent of RHL harvested is based on a comparison of the RHL to the previous or old MRIP estimates. The RHLs through 2019 did not account for the new MRIP estimates; therefore, it would be inappropriate to compare RHLs through 2019 to the revised MRIP estimates.



**Figure 4:** Commercial and recreational black sea bass landings in millions of pounds from Maine through Cape Hatteras, North Carolina, 1981-2021. <sup>6,7</sup>

### *Commercial Fishery*

In 2021, about 4.52 million pounds of black sea bass were landed in the commercial fishery, the highest commercial landings in the time series of available data from 1981 through 2021. Commercial black sea bass landings generally follow the coastwide quota and the 2021 quota of 6.09 million pounds was higher than any previous quota (Table 2, Figure 3). The 2020 quota was not fully harvested in large part due to impacts of the COVID-19 pandemic on market demand. Some COVID-19 impacts likely continued into 2021. Commercial black sea bass landings were lowest in 2009, when 1.18 million pounds were landed and the lowest quota in the time series was implemented (1.09 million pounds).<sup>7</sup>

Black sea bass are a valuable commercial species. Total ex-vessel value averaged \$11.91 million per year during 2019-2021. Landings and average price per pound (adjusted to 2021 dollars) were generally stable from 2010 through 2016. Landings increased in 2017 with an increase in the quota. On an annual coastwide level, the average price per pound tended to decrease with increases in landings since 2016 (Figure 5).<sup>7</sup> Prices are impacted by many factors in addition to landings. The relationship between landings and price varies at the regional, state, and sometimes port level based on market demand, state-specific regulations (e.g., seasonal openings), or individual trawl trips with high landings, all of which can be inter-related.

A total of 183 federally-permitted dealers from Maine through North Carolina purchased black sea bass in 2021. More dealers bought black sea bass in New York than in any other state (Table 3).<sup>7</sup>

According to federal VTR data, statistical area 616, which includes important fishing areas near Hudson Canyon, was responsible for the largest percentage (29%) of commercial black sea bass catch (landings and live and dead discards, as reported by captains) in 2021. Statistical area 615, off southern New Jersey accounted for the second highest proportion of catch (14%), followed by statistical area 621, off southern New Jersey, Delaware, and Maryland (11%); statistical area 613, south of Long Island (8%); statistical area 537, south of Massachusetts and Rhode Island (5%); and statistical area 631, off Virginia (5%; Table 4, Figure 6). Statistical area 613 had the highest



number of trips which reported black sea bass catch on federal VTRs in 2021 (1,230 trips), followed by statistical area 537 (1,016 trips).<sup>8</sup>

In 2021, most commercial black sea bass landings from state and federally-permitted vessels occurred in New York (50%), followed by New Jersey (32%), Massachusetts (29%), Rhode Island (22%), North Carolina (17%), and Virginia (12%).<sup>7</sup> The percentage of landings by state is generally driven by and closely matches the state-by-state commercial quota allocations. States set measures to achieve their state-specific commercial quotas. These allocations were first implemented in 2003. The Council and Commission recently revised these allocations such that they now are based partially on the original state allocations and partially on recent biomass distribution information. The revised allocations were first implemented in 2022.<sup>9</sup>

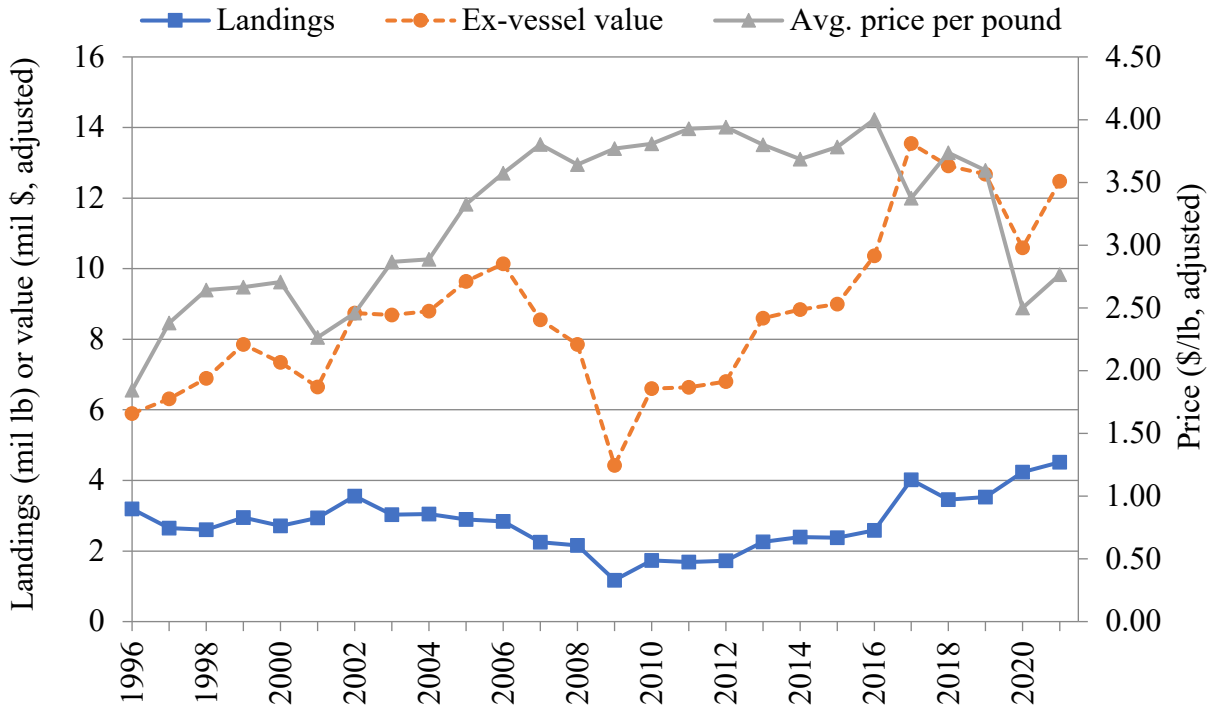
At least 100,000 pounds of black sea bass were landed in 11 ports in 9 states from Maine through North Carolina in 2021. These 11 ports collectively accounted for over 66% of all commercial black sea bass landings in 2021 (Table 5).<sup>7</sup>

Since 1997, a moratorium permit has been required to fish commercially for black sea bass in federal waters. In 2021, 645 of these permits were issued.<sup>10</sup>

A minimum commercial black sea bass size limit of 11 inches total length has been in place in federal waters since 2002. There is no federal waters black sea bass possession limit; however, many states have set possession limits for state waters.

About 65% of commercial black sea bass landings reported on federal VTRs in 2021 were caught with bottom otter trawl gear, 32% with pots/traps, and 3% with hand lines. Other gear types each accounted for less than 1% of total commercial landings reported on VTRs in 2021.<sup>8</sup> It is important to note that federal VTR data do not account for landings of black sea bass by vessels that are only permitted to fish in state waters. Some gear types (e.g., handlines) are more prevalent in state waters than in federal waters.

Any federally-permitted vessel which uses otter trawl gear and catches more than 500 pounds of black sea bass from January through March, or more than 100 pounds from April through December, must use nets with a minimum mesh size of 4.5-inch diamond mesh applied throughout the codend for at least 75 continuous meshes forward of the end of the net. Pots and traps used to commercially harvest black sea bass must have two escape vents with degradable hinges in the parlor. The escape vents must measure 1.375 inches by 5.75 inches if rectangular, 2 inches by 2 inches if square, or have a diameter of 2.5 inches if circular.



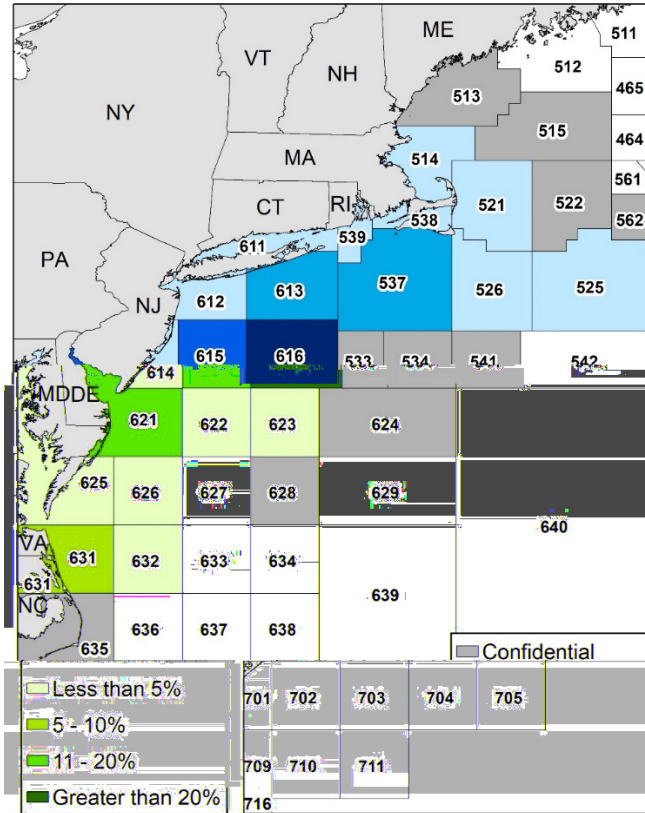
**Figure 5:** Landings, ex-vessel value, and average price for black sea bass, ME-NC, 1996-2021. Ex-vessel value and price are inflation-adjusted to 2021 dollars using the Gross Domestic Product Price Deflator.<sup>7</sup>

**Table 3:** Number of dealers, by state, reporting purchases of black sea bass in 2021.<sup>7</sup>

State	ME	NH	MA	RI	CT	NY	NJ	DE	MD	VA	NC
<b>Number of dealers</b>	0	0	29	22	10	50	32	3	8	12	17

**Table 4:** Statistical areas that accounted for at least 5% of the total commercial black sea bass catch (landings and dead discards) in 2021 based on federal VTRs, with associated number of trips.<sup>8</sup> Federal VTR data do not capture landings by vessels only permitted to fish in state waters.

Statistical Area	Percent of 2021 Commercial Black Sea Bass Catch	Number of Trips
616	29%	518
615	14%	198
621	11%	319
613	8%	1,230
537	5%	1,016
631	5%	80



**Figure 6:** Proportion of black sea bass catch (landings and dead discards) by statistical area in 2021 based on federal VTR data. Confidential areas are associated with fewer than three vessels and/or dealers. The amount of catch not reported on federal VTRs (e.g., catch from vessels permitted to fish only in state waters) is unknown.<sup>8</sup>

**Table 5:** Ports reporting at least 100,000 pounds of black sea bass landings in 2021, associated number of vessels, and percentage of total commercial landings. C = confidential.<sup>7</sup>

Port name	Pounds of black sea bass landed	% of total commercial black sea bass landed	Number of vessels landing black sea bass
Point Pleasant, NJ	578,285	13%	44
Point Judith, RI	502,419	11%	148
Ocean City, MD	482,005	11%	11
New Bedford, MA	292,178	6%	57
Cape May, NJ	277,670	6%	22
Montauk, NY	256,303	6%	108
Hampton, VA	197,356	4%	21
Sea Isle City, NJ	151,400	3%	8
Beaufort, NC	148,156	3%	38
Norfolk, VA	136,004	3%	5
Lewes, DE	C	C	C

## ***Recreational Fishery***

State and federal waters recreational management measures remained virtually unchanged from 2018-2021 (Table 6, Table 7). In 2022, state measures were modified with the goal of achieving a 20.7% reduction in harvest compared to the 2018-2021 average (Table 8). The Council and Commission agreed to use the federal conservation equivalency process to waive federal waters measures for black sea bass for the first time in 2022.

According to the most recent MRIP data, between 1981 and 2021, recreational catch (landings and live and dead discards) of black sea bass from Maine through Cape Hatteras, NC was lowest in 1984 at 4.73 million fish and was highest in 2021 at 42.67 million fish. Recreational harvest in weight was highest in 2016 at 12.05 million pounds; however, harvest in numbers of fish was highest in 1986 at 19.28 million fish. Recreational harvest in weight was lowest in 1981 at 1.53 million pounds, while harvest in numbers of fish was lowest in 1998 at 1.56 million fish (Figure 4, Table 10).<sup>6</sup>

It should be noted that the coastwide 2016 and 2017 MRIP estimates for black sea bass are viewed as outliers by the Monitoring and Technical Committees and the Scientific and Statistical Committee due to the influence of very high estimates in individual states and waves (i.e., New York 2016 wave 6 for all modes and New Jersey 2017 wave 3 for the private/rental mode). Steps have been taken to address uncertainty in these specific estimates in the stock assessment and in management.

Recreational harvest exceeded the 2020 RHL by 56% and the 2021 RHL by 89% (Table 2). The Council and Board agreed to leave the recreational bag, size, and season limits unchanged in 2020 and 2021 despite expected RHL overages. This was viewed as a temporary solution to allow more time to consider how to fully transition the management system to use of the revised MRIP data, including ongoing considerations related to the commercial/recreational allocation and the Recreational Reform Initiative. The 2020 and 2021 RHL overages will be discussed in development of 2023 recreational measures but is unlikely to impact the 2023 RHL and ACL given recent biomass estimates and the Council's Accountability Measures.<sup>11</sup>

In 2021, 52% of black sea bass harvested by recreational fishermen from Maine through Cape Hatteras, North Carolina (in numbers of fish) were caught in state waters and 48% in federal waters (Table 10). Most of the recreational harvest in numbers of fish in 2021 was landed in New Jersey (30%), followed by Massachusetts (19%), New York (14%), and Connecticut (13%; Table 11).<sup>6</sup>

For-hire vessels carrying passengers in federal waters must obtain a federal party/charter permit. In 2021, 895 vessels held a federal party/charter permit.<sup>10</sup>

About 84% of the recreational black sea bass harvest in numbers of fish in 2021 came from anglers fishing on private or rental boats, about 12% from anglers aboard party or charter boats, and 4% from anglers fishing from shore (Table 12).<sup>6</sup>

**Table 6:** Federal black sea bass recreational measures, Maine - Cape Hatteras, NC, 2007 - 2022.

Year	Min. size	Bag limit	Open season
2007-2008	12"	25	Jan 1 - Dec 31
2009	12.5"	25	Jan 1 - Oct 5
2010-2011	12.5"	25	May 22 - Oct 11; Nov 1 - Dec 31
2012	12.5"	25	May 19 - Oct 14; Nov 1 - Dec 31
2013	12.5"	20	Jan 1 - Feb 28; May 19 - Oct 14; Nov 1 - Dec 31
2014	12.5"	15	May 19 - Sept 18; Oct 18 - Dec 31
2015-2017	12.5"	15	May 15 - Sept 21; Oct 22 - Dec 31
2018-2021	12.5"	15	Feb 1 - 28; May 15 - Dec 31
2022	Federal waters measures waived in favor of state measures		

**Table 7:** State waters black sea bass recreational measures in 2018-2021. The only changes made during these years were to maintain a Saturday opening (Massachusetts) or to account for harvest in the February opening (Virginia and North Carolina).

State	Min. Size	Bag Limit	Open Season
Maine	13"	10	May 19 - Sept 21; Oct 18 - Dec 31
New Hampshire	13"	10	Jan 1 - Dec 31
Massachusetts	15"	5	2018: May 19 - Sept 12
			2019 & 2020: May 18 - Sept 8
			2021: May 18 - Sept 8
Rhode Island	15"	3	Jun 24 - Aug 31
		7	Sept 1 - Dec 31
Connecticut private & shore	15"	5	May 19 - Dec 31
CT authorized party/charter monitoring program vessels	15"	5	May 19 - Aug 31
		7	Sept 1 - Dec 31
New York	15"	3	Jun 23 - Aug 31
		7	Sept 1 - Dec 31
New Jersey	12.5"	10	May 15 - Jun 22
		2	Jul 1 - Aug 31
		10	Oct 8 - Oct 31
	13"	15	Nov 1 - Dec 31
Delaware	12.5"	15	May 15 - Dec 31
Maryland	12.5"	15	May 15 - Dec 31
Virginia	12.5"	15	2018: Feb 1 - 28; May 15 - Dec 31
			2019: Feb 1-28; May 15-31; June 22-Dec 31
			2020: Feb 1 - 29; May 29 - Dec 31
			2021: Feb 1-28; May 15-May 31; Jun 16-Dec 31
North Carolina, North of Cape Hatteras (35° 15'N)	12.5	15	2018: Feb 1 - 28; May 15 - Dec 31
			2019: Feb 1 - 28; May 17 - Dec 31
			2020: Feb 1 - 29; May 17 - Nov 30
			2021: May 15 - Dec 31

**Table 8:** State waters black sea bass recreational measures in 2022.

State	Min. Size	Bag Limit	Open Season
Maine	13"	10 fish	May 19-Sept 21; Oct 18-Dec 31
New Hampshire	13"	10 fish	Jan-Dec 31
Massachusetts	16"	4 fish	May 21-Sept 4
Rhode Island private & shore	16"	2 fish	May 22-Aug 31
		3 fish	Sept 1-Dec 31
Rhode Island for-hire		2 fish	June 18-Aug 31
6 fish		Sept 1-Dec 31	
Connecticut private & shore	16"	5 fish	May 19-Dec 1
CT authorized for-hire monitoring program vessels		5 fish	May 19-Aug 31
		7 fish	Sept 1-Dec 31
New York	16"	3 fish	June 23-Aug 31
		6 fish	Sept 1-Dec 31
New Jersey	13"	10 fish	May 17-Jun 19
		2 fish	July 1-Aug 31
		10 fish	Oct 7-Oct 26
		15 fish	Nov 1-Dec 31
Delaware	13"	15 fish	May 15-Dec 11
Maryland			
Virginia			
North Carolina North of Cape Hatteras (35° 15'N)			

**Table 9:** Estimated recreational black sea bass catch (harvest and live and dead discards) and harvest from Maine through Cape Hatteras, North Carolina, 2012-2021.<sup>6</sup>

<b>Year</b>	<b>Catch (millions of fish)</b>	<b>Harvest (millions of fish)</b>	<b>Harvest (millions of pounds)</b>	<b>% of catch retained</b>
2012	34.95	3.69	7.04	11%
2013	25.78	3.02	5.69	12%
2014	23.91	3.97	7.24	17%
2015	24.11	4.94	9.06	20%
2016	35.81	5.84	12.05	16%
2017	41.19	5.70	11.50	14%
2018	24.99	3.99	7.92	16%
2019	32.32	4.38	8.61	14%
2020	34.11	4.23	9.05	12%
2021	42.67	6.44	11.97	15%

**Table 10:** Estimated percentage of black sea bass recreational harvest (in numbers of fish) in state and federal waters, from Maine through Cape Hatteras, North Carolina, 2012-2021.<sup>6</sup>

<b>Year</b>	<b>State waters</b>	<b>Federal waters</b>
2012	71%	29%
2013	69%	31%
2014	72%	28%
2015	73%	27%
2016	61%	39%
2017	42%	58%
2018	61%	39%
2019	64%	36%
2020	57%	43%
2021	52%	48%
2012-2021 avg	62%	38%

**Table 11:** State-by-state contribution to total recreational harvest of black sea bass (in number of fish), Maine through Cape Hatteras, North Carolina, 2019 - 2021.<sup>6</sup>

State	2019	2020	2021	2019-2021 average
Maine	0.0%	0.0%	0.0%	0.0%
New Hampshire	0.0%	0.0%	0.0%	0.0%
Massachusetts	12.0%	13.6%	18.8%	14.8%
Rhode Island	11.8%	14.6%	7.9%	11.4%
Connecticut	11.8%	9.6%	13.0%	11.5%
New York	36.0%	30.1%	14.4%	26.9%
New Jersey	19.0%	19.2%	30.0%	22.7%
Delaware	1.0%	3.3%	5.5%	3.3%
Maryland	3.0%	1.9%	3.3%	2.7%
Virginia	5.3%	6.5%	6.9%	6.2%
North Carolina	0.1%	1.1%	0.1%	0.4%

**Table 12:** Percent of total recreational black sea bass harvest (in numbers of fish) by recreational fishing mode, Maine through North Carolina, 2012-2021.<sup>6</sup>

Year	Shore	Party/charter	Private/rental	Total number of fish (millions)
2012	1%	19%	80%	3.82
2013	2%	9%	89%	3.10
2014	3%	18%	79%	4.31
2015	0%	20%	79%	5.26
2016	4%	8%	88%	6.03
2017	1%	9%	90%	6.00
2018	2%	12%	86%	4.07
2019	3%	17%	79%	4.52
2020	2%	11% <sup>a</sup>	87%	4.32
2021	4%	12%	84%	6.48
<b>2012-2021 avg</b>	<b>2%</b>	<b>14%</b>	<b>84%</b>	<b>4.79</b>

<sup>a</sup> Party and charter fishing was restricted in all states for part of 2020 due to the COVID-19 pandemic.



## References

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- <sup>2</sup> Northeast Fisheries Science Center. 2017. 62nd Northeast Regional Stock Assessment Workshop (62nd SAW) Assessment Report. Northeast Fisheries Science Center Reference Doc. 17-03. 822 p. Available at: <https://www.nefsc.noaa.gov/publications/crd/crd1703/>
- <sup>3</sup> Blaylock, J. and G.R. Shepherd. 2016. Evaluating the vulnerability of an atypical protogynous hermaphrodite to fishery exploitation: results from a population model for black sea bass (*Centropristis striata*). *Fishery Bulletin* 114(4): 476-489.
- <sup>4</sup> Northeast Fisheries Science Center. 2022. Management Track Assessment June 2021. Northeast Fisheries Science Center reference document; 22-10. DOI: <https://doi.org/10.25923/4m8f-2g46>
- <sup>5</sup> For more information on the commercial/recreational allocation revisions, see the fact sheet at: <https://www.mafmc.org/s/SFSBSB-Allocation-FAQs.pdf>.
- <sup>6</sup> Personal communication from the National Marine Fisheries Service, Fisheries Statistics Division. Accessed June 2022. Available at: <https://www.fisheries.noaa.gov/data-tools/recreational-fisheries-statistics-queries>
- <sup>7</sup> Unpublished NMFS commercial fish dealer data (i.e., “DERS”), which include both state and federal dealer data).
- <sup>8</sup> Unpublished NMFS VTR data.
- <sup>9</sup> More information on the Black Sea Bass Commercial State Allocation Amendment/Addendum is available at: <https://www.mafmc.org/actions/bsb-commercial-allocation>.
- <sup>10</sup> Unpublished NMFS permit data.
- <sup>11</sup> A summary of the accountability measures is available at: [https://www.mafmc.org/s/AMs-description\\_SF\\_scup-BSB\\_Dec2020.pdf](https://www.mafmc.org/s/AMs-description_SF_scup-BSB_Dec2020.pdf)